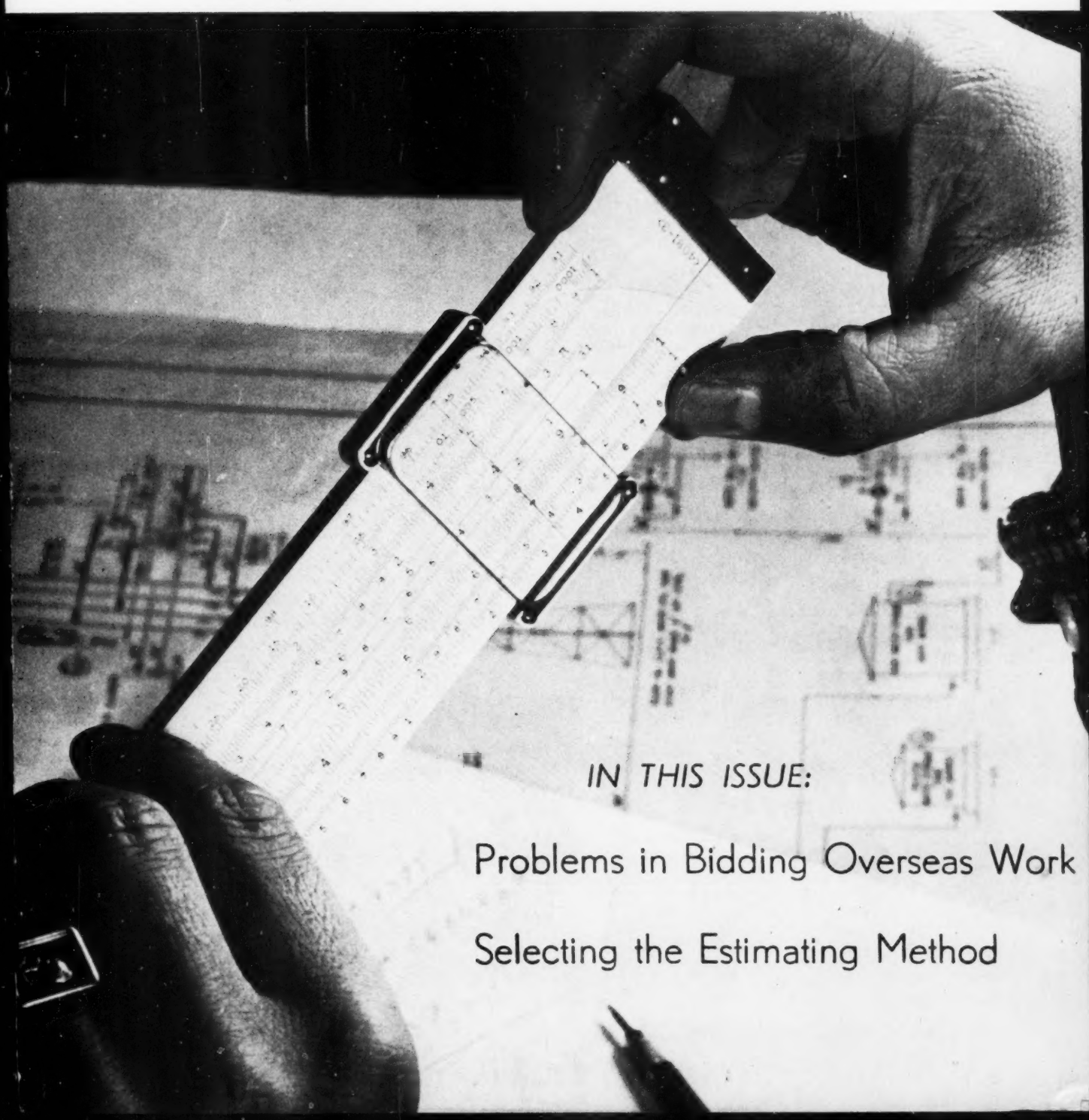
AMERICAN ASSOCIATION OF COST ENGINEERS

Vol. 1, No. 3 June, 1959

BULLETIN



IN THIS ISSUE:

Problems in Bidding Overseas Work

Selecting the Estimating Method

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CONTENTS

Notes from the Editor 46
Report from the President 47
Problems in Bidding Overseas Work 48
Minutes of Second Annual Meeting 51
Selecting the Estimating Method 53
Technical Papers 55
News from the Regions 56
AACE Insignia 58
What's Happening 58
Regional Section Directory 59
Personnel Service 59
AACE Organization for 1959 59

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Notes from the Editor

"See you in Pittsburgh!" seems to be the pass-word nowadays. After looking through the program for the forthcoming 3rd Annual Meeting, you will no doubt agree that the place to be on June 24th *is* in Pittsburgh at the AACE Meeting.

Having the dual role of Executive Secretary and Editor keeps me changing hats. However, the duties overlap and compliment each other. Therefore, through this column I plan to seek your assistance in helping us to help you. This can be accomplished by strengthening our Association and its publication.

We would like to add some new features to the *Bulletin* and expand others. One of the Objects of the AACE is "To provide forums and media through which experiences with the principles and techniques of Cost Engineering may be reported, discussed and published for the common good". This will require your cooperation. How would you like to see features like "Estimating Experiences", "Rules of Thumb", "Short Cuts That Work". These are subjects that have been suggested. They are by no means exhaustive. If you will jot down some experience (good or bad) that you have had, some ideas that you have developed, or a tip that you would like to share — please send it in. If we can get the ball rolling this can become a worthwhile feature.

Reader surveys of association publications prove again and again that members rate the personals (What's Happening) section of the magazine high in importance. We are anxious to expand this section. I would like to urge you to keep us informed of promotions, transfers, professional activities, your golf score, new additions to the family, what luck you had on that fishing trip. Don't be bashful or modest; send in that news.

You may be interested in knowing that as we go to press our Association has grown to 682 active members from the United States, Canada and eleven other countries. There are also applications being received daily.

Returns have been good on the ballots for amending the AACE Constitution and By-Laws. If you haven't already sent yours in — do it now. Remember your ballot must be *received* by June 20th to be counted.

I'll be looking forward to seeing you on the 24th.

By the way, August 10th is the deadline for copy for the next issue of the *Bulletin*. Let us hear from you.

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Report from the President

C. Arthur Miller
Canadian Industries Limited
President of AACE

Cost estimating, cost control, profitability.

Forums, discussions, sharing of knowledge.

Cost engineering instruction.

Standardization.

An excellent well-balanced program embracing all these objectives is waiting for you at Pittsburgh. The AACE Annual Meeting is not just an opportunity to hear a number of good papers on cost engineering — it's an opportunity to participate, to discuss problems in your own field of work, and to meet others in the same work with the same problems.

Under the general direction of Barney Gaffney our Vice President, Jim Caufield, Chairman of the Program Committee and Jim Black, Chairman of the Convention Arrangements Committee and a long list of assistants have been working laboriously to organize an outstanding convention. The program will give you some indication of the results of these efforts.

I wish to draw your attention particularly to the workshop sessions. An innovation to the program this year, the workshops will afford an opportunity for a thorough-going "bull session" on a variety of subjects of interest to cost engineers. Pick your subject now and start lining up the questions and problems you wish to raise in the discussions.

In the meantime your Board has also been hard at work on many problems. You might be interested in knowing how the work and responsibilities have been delegated among the Board members. The organization chart for 1959 has been published with this in mind*. It shows the distribution of responsibilities among the various officers and directors as well as all committee chairmen. These committees along with the regional section are the life blood of your Association. They are working hard to give the AACE a stature of which you will be justly proud. In carrying out these activities they are worthy of your co-operation, support and contributions.

The proposed amendments to the Constitution and By-Laws, a copy of which should be in your hands now, is the result of a great deal of thought and discussion on the part of the Board and particularly of Dr. Zimmerman (and Norman Bach before him) who co-ordinated the work of developing the proposed changes. The amendments represent a series of changes and improvements which one would expect in a newly formed organization. In essence they spell out more precisely the duties and functions of officers, directors, committees and regional sections. More practical procedures for handling nominations and making amendments are included.

In addition to the above the revised Constitution contains a major change in one of our objectives. This is the recommendation to broaden the field of interest of the Association by deleting the words *"in or related to the process industries"*. This recommendation has not come lightly; yet it was the unanimous opinion of the Board to make the change. It has wide ramifications and foreshadows the possible division of the Association into a "Process Industries Group", a "Heavy Construction Group" and possibly other groupings. It also anticipates a substantial increase in membership and many more organizational changes. In effect it gives full scope in the objectives to the term "cost engineering".

Before voting "for" or "against" this recommended change every member should give it serious thought.

The Board has been pleased with the *Bulletin* to date and with the reaction and response to the first two issues. A great deal of work is necessary in turning out this class of publication, the bulk of it being done by the Executive Secretary with some help from the Secretary and the Publication Committee. Not only are there the multitude of jobs such as cover design, format, set-up, selecting material, dealing with the printer etc. but each issue involves a certain amount of editing of technical articles, a requirement which is likely to increase as our Association grows. In order to provide the desired standard for a publication which has to meet specific deadlines four times a year, it has become obvious that a person fully experienced and qualified in technical editing is required. For this purpose the Board has just completed arrangements for hiring a suitable person on a part time basis who will be known as Technical Editor.

In addition to the regular committee work the Board is working on many other problems such as a formal membership certificate, a revised brochure for publicity purposes, a publication policy, etc. all of which come under the run-of-the-mill activities of operating an organization. Some of these activities do not involve cost engineering, but we still have to balance the budget and I can assure you that we are making good progress in getting two dollars of value for every one received.

See you at Pittsburgh.

* See page 59

Problems in Bidding Overseas Work

Leroy W. Sowers, Cost Engineer, Henry J. Kaiser Company, Oakland, California

Problems that require special consideration when submitting proposals or constructing facilities in foreign countries are many and varied. They may be divided into two basic categories: first, problems in estimating normal components — material, labor, equipment, overhead, etc.; second, special problems encountered in foreign work that have no similarity to work within the United States.

MATERIAL

Usually the starting point of an estimate is the material. To get prices in the United States, you telephone the man from whom you expect to buy and find out what he is going to charge. In most foreign countries it is not that simple. There are few materials dealers in the sense that we understand the term. In many countries there are few materials manufactured, but such material that is may be bought directly from the manufacturer.

Or the material may be bought from a broker who has no warehouse and no stock on hand. He takes the order, contacts various small manufacturers and rounds up enough material to fill the order. You may buy through an importer who ships the item in, pays shipping charges and duties and adds a big profit to the total.

Information obtained from vendors in a foreign country may not be reliable. They'll promise anything. If material is needed in three months, they promise it in two. If they can't deliver for six months, it doesn't bother them because that is the normal way of doing business. Prices are nearly always qualified. They are tied into a cost index of some kind. The price paid on delivery of the order might be considerably different from the amount quoted at the time of pricing.

Prices are often quoted in unusual units. In the United States, we work with the modified British weights and measures. The metric system is used in many other countries and is more convenient. However, in some countries there still may be differences for which you must compensate. Some countries use a system that has neither American nor metric units. In the U. S. we have a ton that is 2,000 lb. and a cwt. that is 100 lb. In most of the British Commonwealth, the long ton in use is 2,240 lb. and a cwt. is 1/20 of the long ton or 112 lb. When you buy a sack of cement expecting 94 lb. weight, it is confusing to find that it actually weighs 112 lb. You must determine what units the venders are quoting.

Another problem is the matter of quality of material. Quality control and specification to which material is produced are not comparable to ours in most cases. When you price material, you are not sure what quality that material is going to be. In the United States, for example, if first quality hard-burned brick is ordered the brick that will be delivered will be of uniform size and color. In most foreign countries the bricks are not uniform in size or shape; some are mostly mud, some are hard as rock.

LABOR

The second major component in most estimates is labor. Labor cost is labor rate multiplied by work hours. Labor rates in foreign countries are considerably different from those in the United States. Labor in other countries is in general cheaper than here, but there are also subdivisions of crafts and trades that are entirely different. Here in pouring concrete there are laborers in the excavation, carpenters on the formwork, iron workers on the reinforcing steel, and cement finishers doing the finishing. In most European countries, on the other hand, the entire concrete work from excavation to finishing is handled by one craft called the concrete worker.

In Italy the sub-divisions are called qualified, expert and specialized workers; in other countries they are called grades one, two or three. In the United States, an entire crew of welders is paid at the rate specified in the contract. In most foreign countries welders are paid different rates, depending upon whether they are grade one, two or three workers — and that grading dependent upon skill in the craft.

In other countries there is tremendous difference between the rate paid skilled and unskilled labor In the U. S. a common laborer gets about $2/hr. and a skilled electrician or pipe fitter gets about $4/hr., a 2-to-1 ratio. Overseas, a common laborer gets a few cents a day and skilled craftsmen get several dollars a day. In India a laborer was getting two rupees or 40 cents a day. After being taught to operate cranes and run bulldozers he wanted 12 rupees a day, a 6-to-1 ratio. The same thing is true of a foreman's wages. Domestically a foreman draws about 10% more wages than the craftsmen working under him. In most foreign countries, the foreman will get at least double the average wages of the crew working under him.

Labor production in a foreign country is usually compared to production in the United States. Your information might indicate that the workers will produse 60% as much as American workers. The first question that should be asked is "what are they using as a basis for an American worker?" To say that general construction as a whole will take 100 man-hours of foreign labor to accomplish 60 man-hours of American labor is a very rough approximation. It might not apply to any one phase or craft.

Another thing that affects production rates as quoted is the manner of doing the work. In this country a man who wants to cut an eight ft. piece of plywood takes a Skilsaw and is through with it in a matter of seconds. In most foreign countries he would take a hand saw, and it would take minutes instead of seconds. In loading a truck, one man with a payloader dumps the stuff in; overseas six men with shovels throw it. When comparing man-hours per unit of work, you not only have to consider the difference in production of the man, but also the difference in method by which the work is done.

Social benefits are a major factor in foreign labor costs. They are generally more complicated and much higher than those encountered domestically. In some countries they run as much as 80-100% of the basic wage. In Italy there are nearly 36 benefits added to the basic wage. Some benefits go directly to the worker along with his pay, some to government agencies, some to insurance companies. The total cost of labor is about 70% higher than the basic scale wage.

Laws affecting these various rates are of course in a foreign language and, furthermore, in legal language. It is almost impossible to find out what these laws actually mean. The best sources of information are contractors in business in the particular area, but you will find great variation in the advice depending upon their individual accounting practice. Some consider labor to be only the basic wage rate. Some consider labor to be the total amount paid to a man. Some include insurance and taxes with wages. Even factual information from a local businessman must be analyzed closely for content and meaning.

SUPERVISION

In the supervision category, foreign jobs are entirely different from domestic jobs. An American supervisor, who works for a straight monthly salary here, usually requires considerably greater monthly salary in a foreign country. In addition, travel and living expenses may have to be paid. If it's a long job, you may have to send their families. Wives want sewing machines, or washing machines or something — you have to send along household goods with them. Occasionally in remote locations, housing may be required for them, as well as supplies of groceries, toilet paper and everything else imaginable. There may not be any place to buy them.

In most countries that are fairly well advanced (European and some South American countries), the second level of supervisory help can be obtained locally. It is an advantage to do so because five or six men can be hired for the same cost as sending one American. However, it may be impossible to find qualified people to act as foreman, area foreman, craft supervisor and other jobs of similar responsibility. It is then necessary to send Americans, which means that the ratio of supervision to workmen on a job will be greater than normal.

When you get outside the United States, the amount of paper work for administration of the job increases. More work is necessary in connection with personnel records (work visas, income tax clearance, medical certificates, etc.) for the people going into the country. Also, outside the United States there is more public relations work. There is always some minor politician or celebrity who wants to be shown through the works, and seemingly no one less than the project manager or the job superintendent can show him through. Time that should be spent running the job is spent as host.

I don't know of any job in the United States where the construction superintendent or manager would consider a stiff shirt, white tie and dinner jacket standard equipment for his job. But in most foreign countries there are a great many social functions in connection with a construction project. Dignitaries visit the site, and a reception and dinner are held for them afterwards; or the client decides to entertain the supervisory force of the construction company. It is not uncommon, and it takes much time and expense.

Scheduling for foreign jobs has to allow for longer construction time. First, ocean shipment often takes three or four months. In shipments from the U. S. to South America, where the boat makes the trip in 17 days, it takes about two months from the time the material is delivered to the stateside dock until the time it clears the dock in South America. And that's a minimum.

There are many holidays in most foreign countries. By paying a domestic worker sufficient overtime, you can get him to work through holidays. But there are holidays in other countries when people won't work at any price. There is always the attitude of "manana" — it's not particularly confined to Mexico. If a man doesn't get something done today or tomorrow, it will still be there next week, and he is not going to worry about it. After Americans have been exposed to this attitude for three or four months they begin to adopt it. The resulting extended schedule affects the cost of supervision because of the greater length of time that it is tied up at escalating prices. Most prices are not firm — escalation forces the cost of the work up — and the longer the elapsed time between start and finish, the greater the effect on cost.

TRANSPORTATION

Ocean freight charges are based on shipping tonnage. Actual weight of an item and the weight that the shipping company charges are often very different. Shipping companies charge according to a shipping ton of 2.240 lb. or 40 cu. ft. of bulk, whichever is greater. It is amazing how heavy an item can be and still be shipped at bulk rates. The rate per shipping ton can be obtained easily, and actual weight of the item is available from the vendor, but it is up to the estimator to apply some kind of an allowance factor for the difference between actual weight and shipping tons charged.

Freight forwarders' fees are based on each individual shipment. If a large shipment is involved, chances are that it will not all be shipped together. There might be two, three or a dozen shipments. Freight forwarders' fees apply to each rather than to the total order. When material arrives at the foreign port there is a great deal of red tape before it clears customs and the dock. It can take from two weeks to four months.

The greatest delay is in getting papers signed. It is necessary either to have a traffic man on the dock who hand-carries the papers, pestering people into signing them, or else to meet the responsible people out in the hall and give them a few coins to get the papers signed. Most companies, especially working on a job where the government is involved, can't resort to any kind of bribery. A solution is to work through a shipping agent. The agent is paid a fee, and it is up to him to get the material off the dock.

After material has cleared the dock, the problem is availability and reliability of transportation in the country. Most foreign countries have good rail and highway systems between the main centers of popu-

lation. Away from those main routes, there is almost nothing. Even if there are railroads, the cars are often small. Tunnels are no bigger than necessary for passage of the cars. If a shipment is abnormal in weight or size, there may be trouble getting it shipped by rail. Most foreign countries have good trucking systems. Roads are good, even when unpaved. Many bridges, however, have rigid load limits on them; it is sometimes necessary to reinforce or rebuild them to handle heavy loads.

SOME OTHER FACTORS

Another basic component of the estimate is sub-contracts. In foreign countries, most sub-contractors are happy to give an over-all unit price, per yard of concrete or square meter of wall or ton of material. The prime contractor then is taking all the responsibility for quantities and unknown costs not covered by the quoted unit price. With complete plans, detailed specifications and plenty of time, you can get sub-bids from foreign sub-contractors. However, bids are usually qualified by being tied in to some cost-of-labor index, cost-of-living index or other reservation. This means that bids are not firm in the normal sense of the word; you are still taking the risk for some of the cost.

There is a tendency on the part of most foreign contractors to avoid giving any breakdown of the price. They will not separate labor from material or tell how many man-hours of labor are involved in the over-all operation. It is difficult to obtain that information in the United States, but it is practically impossible to obtain it once outside the United States.

In most foreign countries small construction equipment is available. Big trucks, big tractors, big compressors, big cranes are not easy to find. The rental rates are high compared to those in this country. We have found in the U. S. that 10 months rental is equal to the purchase price. In many foreign countries, three months rental is equal to the purchase price. It is then a question of finding the equipment and having it available when needed. It is often necessary, and for estimating purposes the safe approach, to plan to buy construction equipment, ship it in and salvage it when the job is finished. There are construction companies in foreign countries that have equipment, but I don't know of any place where there are construction equipment rental agencies such as those in the United States.

One engineering consideration of importance: whether you are going to build the project according to American or foreign standards. One approach is to take advantage of local material and local construction practices. If you use American standards there is an entirely different approach. The amount of time involved and the cost will differ, even in the matter of building codes.

Most foreign countries will accept the American Codes. However, their use usually means wasting money. For example, in Germany unfired pressure vessels are designed with a unit stress of 30,000 psi. Our codes allow 16-18,000 psi. In India, however, any elevated conveyor gallery has to have a concrete slab; checker plate or grating will not be accepted. It makes an appreciable difference what the engineering approach is, and what local design codes are.

LANGUAGE

I want to mention a few items now that are entirely different from what we run across in this country. The first is language. Unless the people who are gathering the information on which to base the estimate and those who are going to run the job in the field can speak the language, it becomes necessary to deal through an interpreter. That increases the chances for error. If I say something to one man, and he repeats it to another, the final understanding will differ from the original intent. When two languages are involved the exaggeration is much greater. Difference of meaning occurs in translation. For example, the Spanish word "proyecto" could mean "project," "planning," "engineering," or "design." The interpretation of the translator can change the entire meaning.

Unfortunately, English-speaking people seem to feel that everybody else in the world should learn English. Wherever you go in the world, you can usually find someone that understands enough English to get what you want without speaking another language, so there seems to be no pressing need to learn one. However, many people in other countries resent this, just as you and I would resent an alien living in this country for several years who made no attempt to speak English.

Because of the language difficulty, it is sometimes necessary to parallel a portion of your organization with bi-lingual personnel. The project manager or construction superintendent will need a bi-lingual secretary who can take dictation, transcribe and translate both languages. In many cases field superintendents, craft supervisors and others will need assistants who can speak both languages. This adds to the overhead organization and consequently to the expense of the project.

CURRENCY & FINANCE

There are a few things to point out about money: the difference between exchange rates, or monetary inflation, and cost increases. In most countries there are at least two exchange rates — an official rate established by the government which is only good in dealings between governments, and an actual free exchange rate which is the amount of one currency that can be traded for another. In some cases there is a third exchange rate to subsidize a particular industry. For example, in Brazil it takes about 160 cruzeiros* to buy one dollar on the free market. The official rate is about 40 cruzeiros to the dollar. However, if the shipping industry needs dollars to operate, the government will furnish them at 51 cruzeiros to the dollar.

Fluctuations in the monetary exchange rate are great. In July 1957 a cruzeiro was 70 to the dollar; now it is about 160 to the dollar.* In a little over a year the rate has more than doubled. However, during the same time, the cost of living, or the wages paid, or the actual construction cost in Brazil has gone up only about 25%. There is little relation between monetary exchange rate and price increase or inflation within the country itself. There is a ratio, but it is remote; there is a big time lag between the monetary rate change and the change in actual costs within the country.

(Continued on page 55)

*Rate on free market is now about 130 cruzeiros to the dollar.

Minutes of Second Annual Meeting

June 18, 1958

Tomlinson Hall, Case Institute of Technology

Cleveland, Ohio

1. Meeting called to order at 9:05 A. M. by President John W. Hackney.

2. In the absence of J. T. Husted, E. D. Shanken was appointed Acting Secretary.

3. Treasurer's report was read by E. D. Shanken and filed for audit.

4. President J. W. Hackney reported on the Board of Directors' meetings that were held on January 31, February 1, June 15 and June 16, 1958. He summarized the progress being made and specifically noted the following:

(a) establishment of the Delaware Valley and Chicago-Midwest Sections, bringing our total to seven. Special emphasis will be placed on the development of existing and proposed sections.

(b) explained the organization of the Director-Sponsor relationship between active Committees and the Board of Directors. A member of the Board is assigned as a sponsor of a group of committees and coordinates and supervises their activities within the group and in relation to other committees.

(c) increased activities of the office of the Executive Secretary.

(d) authorization of the publication of a *Bulletin* that would contain technical papers in addition to Association news. It was hoped that the first issue could be made in the fall.

(e) noted the reasons for the forthcoming ballot for changing the Constitution and By-Laws. Proposed that the Nominating Committee shall in the future announce its slate at the Annual Convention and after allowing time for additional nominations by petition, the slate will be presented to the membership for letter balloting.

(f) "The Board and I take this occasion to express our heartfelt thanks to all of those individuals who are so materially contributing to the rapid advance of the Association."

5. Report of Committees:

Bibliography Committee

In the absence of J. Weaver, S. Katell reported on the progress of the Bibliography Committee. He emphasized that the questionnaire, that would be distributed soon, should be completed and returned as soon as possible in order to give the Bibliography Committee an idea of the interest of the membership, in this particular area.

Publications Committee

R. E. Fithian, Chairman of the Publications Committee reported on the activities of that committee, stressing the efforts that have been made in formulating a Publication Policy.

A.A.C.E. Bulletin

E. D. Shanken, Editor of the *A.A.C.E. Bulletin*, reported on the plans for this forthcoming publication and urged the membership to actively contribute technical information and suggestions for material to be included, especially activities of, and papers presented at, regional meetings.

Publicity Committee

In the absence of I. Lavine, Dr. O. T. Zimmerman reported for the Publicity Committee and stressed the need for getting current news items to the Publicity Committee. He urged every Regional Section to have a representative on this committee so that our Association can adequately publicize its activities locally and nationally.

Coordinating Committee

Miss E. Eaves, Chairman of the Coordinating Committee reported for that Committee and noted that membership in the Committee was being drawn from the Mid-Atlantic Section because most of the Societies had headquarters in New York and this would afford an opportunity to work together. The Committee is working out reciprocal arrangements for the dissemination of technical information.

Education Committee

Dr. O. T. Zimmerman, reported for the Education Committee and mentioned that the committee has assembled an outline of the essentials of Cost Engineering that should be taught in the Colleges. This will be distributed to the engineering departments of all colleges and universities.

In the discussion that followed, O. T. Zimmerman noted that this report would be considered only a preliminary report of this Committee with exploration as its primary purpose. W. E. Hand suggested that the Committee Report at the 3rd Annual Meeting should include what is presently being taught, and O. T. Zimmerman assured him that this would be included.

Insignia, Awards and Certificates

J. W. Hackney reported for N. Bach on Insignia, Awards and Certificates. He noted the jewelry with the A A C.E. emblem had been quite popular and that the Board was exploring the idea of a membership certificate. C. H. Chilton was the recipient of the A.A.C.E. Award of Merit for 1958. This award was presented at the banquet on June 16, 1958.

Arrangements Committee

A. P. Stern, Chairman of the Arrangements Committee for the 2nd Annual Meeting reported. Dr. B. J. Gaffney proposed a rousing cheer for A. P. Stern and his Committee because of the fine arrangements. Cheered.

Program Committee

C. R. Hirt, Chairman of the Program Committee reported and mentioned that the Committee would profit from experience and criticisms this year. T. J. Junker proposed a rousing cheer for C. R. Hirt and the committees who made this 2nd Annual Meeting possible. Cheered.

J. J. Caufield was appointed Chairman of the Program Committee for the 1959 Annual Meeting.

Nominating Committee

J. R. Behrens reported for the Nominating Committee and presented the following slate of nominees for office:

President — S. Katell, C. A. Miller.
Vice President — J. C Agarwal, B. J. Gaffney.
Secretary — E. F. Brummerstedt, Z. A. Stanfield.
Treasurer — C. H. Chilton, T. C. Ponder, E. F. Young, Jr.
Directors — E. K. Clark, F. A. Franks, W. F. Gott, W. E. Hand, A. P. Stern.

J. W. Hackney mentioned that additional nominations could be made by petition sent to the Executive Secretary within the next two weeks.

The floor was opened to nominations for the new nominating committee and the following were nominated: A. W. Seekins, W. J. Hanlon, W. H. Kluge, P. H. Deming, D I. Meikle, J. J. Farrell, J. M. Ballenger, and W. J. Dodge. W. J. Dodge declined in favor of J. M. Ballenger. It was moved by S. Katell and seconded that the Secretary cast a ballot for the entire slate of nominees and that they be the new Nominating Committee. Carried.

6. Balloting took place for the 1959 location of the Annual Meeting. Invitations from Houston, Texas and Pittsburgh, Pennsylvania had been received at the banquet on June 16, 1958.

Admissions Committee

J. C. Agarwal, Chairman of the Admissions Committee reported and noted that the Committee hoped the membership would support the changes in the Constitution and By-Laws pertaining to requirements for admission. Ballots would be sent along with the one for election of officers. He mentioned that processing of applications had been speeded up. J. W. Hackney noted that there had been an improvement in the processing procedure and thanked J. C. Agarwal and E. D. Shanken for making this possible.

Regional Activities Committee

B. V. Nemeth, Chairman of the Regional Activities Committee reported. The Committee has formulated lists of the A.A.C.E. membership by geographic areas and developed an instruction booklet on how to organize a regional section. He urged the membership to take advantage of this information and organize a section in their area.

A brief report was made by each of the Regional Sections.

A. W. Seekins reported for the Pittsburgh Section.

D. F. Brosnan reported for the Mid-Atlantic Section.

J. S. Bleakie reported for the Gulf Coast Section.

R. E. Jones reported for the North East Ohio Section.

W. E. Hand reported for the San Francisco Bay Area Section.

D. T. Brink reported for the Chicago-Midwest Section.

H. A. Chapman reported for the Delaware Valley Section.

C. H. Chilton then reported that 50% of the membership belonged to a regional section and 10% lived in areas covered by a section but were not active.

Planning Committee

Dr. B. J. Gaffney, Chairman of the Planning Committee reported on the Committee's recommendations for an A.A.C.E. program for the future.

7. Meeting was recessed at 12:05 P. M.

8. Meeting reconvened and called to order by Vice President C. R. Hirt at 1:55 P. M.

9. Discussion continued on Planning Committee report.

10. President J. W. Hackney assumed the Chairmanship of the meeting at 2:03 P. M.

11. C. A. Miller, Director-Sponsor of the A.A.C.E. Technical Committees reported on the progress and activities of these committees. He mentioned the meeting of these committees in New York on April 11. 1958 and the results which would be presented following his report. He invited members, who were interested and willing to work, to contact him as the committees could use additional personnel.

12. C. A. Miller presented "A Proposed Standard Cost Code". Discussion and suggestions followed which will be considered by the Committee on Cost Records Standards.

13. D. Seltzer, Chairman, Committee on Terminology Standards presented "Definitions of Major Terms in Cost Code."

14. W. H. Patterson presented "Classification of Estimate Types".

15. H. J. DeLamater presented "Heat Exchanger Cost Data".

16. J. J. Caufield reported on the results of the recent survey on Cost Indexes. The data obtained from this survey has lead the Cost Index Committee to plan the following projects:

1. As a starting point the Cost Index Committee will undertake to compile a comprehensive "digest type" report on the published indexes, and make it available for publication through regular Association channels.
2. In connection with the report mentioned above, the Cost Index Committee will work toward the establishment of standard index terminology and will develop a bibliography on index literature.
3. The Cost Index Committee will collect a manual of special reports, starting with the material which has already been submitted as a result of this survey. The manual will be turned over to the Executive Secretary for control but will be available to the membership.
4. The Cost Index Committee will undertake to establish a guide for setting up private indexes to fit specific industries and situations.

17. It was announced that as a result of the balloting for meeting location that Pittsburgh, Pennsylvania would be the location of the 1959 Annual Meeting and that in 1960 the meeting would be held in Houston, Texas.

18. President J. W. Hackney presented a recapitulation entitled "No Place for Dollar Illiterates".

19. Meeting adjourned at 4:07 P. M.

Respectfully submitted.

EDWARD D. SHANKEN,
Acting Secretary.

Selecting the Estimating Method

A. W. Seekins, Columbia-Southern Chemical Corporation, Pittsburgh, Pennsylvania

Estimators have been establishing methods for years. How modern is our system in selecting the estimating method?

Facts pertinent to cost estimates differ greatly in different fields. Thus an experienced estimator of steam power plant costs might find himself unfamiliar with those matters necessary to make a good estimate for a hospital, an office building, a sewerage system, a residential structure or a chemical plant.

Although successful estimating of construction costs in any field requires familiarity with construction procedures and various trade customs of that field, the general methods employed by estimators in different fields are similar. In order to illustrate these methods, and to clarify the kinds of trade facts and customs with which an estimator must be familiar, I will direct my comments to four basic types of estimates:

- Guess-timates
- Rough or unit cost estimates
- Preliminary estimates
- Firm estimates

QUICK AND ROUGH

The guess-timate is a quick method used by estimators when little time is available for preparation or investigation. Accuracy depends upon experience, ability and judgment of the estimator. He can refer to past records of similar jobs and, with material and labor cost indexes, come up with an accuracy of 15-20%. Most estimators prepare these estimates only for a rough price. If used, their scope should be understood by all.

Rough or unit cost estimates are used when projects are small or patterns are standard. This type of estimating can be used satisfactorily for appraisal of land, piping, vessels, buildings, foundations, excavations and similar items.

Weakness of this estimate, however, is the difference in material and labor costs in various locations. The estimator must be thoroughly acquainted with the location and its material and labor markets. On-location details, if known by the estimator, help make this type of estimate most valuable.

Turner Construction, Engineering News-Record, Marshall and Stevens and such reference books as "Estimating Building Costs," by F. C. Barnes, have helpful tables and reference charts for making such estimates.

PRELIMINARIES HELP PLAN

The preliminary estimate provides material for a capitalist to plan new plant, new building or addition to present investments. It provides him with a cost of required appropriation. It is usually required by management if an economic study is necessary to justify expenditure. It helps management secure approval of funds necessary for a firm estimate.

Some preliminary estimating is promoted under fixed-overhead expenditure. We could discuss direct and indirect costs, but our space is too limited.

Preliminary estimating is used frequently in estimating costs of new processes. After the pilot plant is successful, a special group of estimators may determine such facts as demand, market, market development, freight equalization and competition.

COMPARE COST OF CAPITAL INVESTMENT — TABLE I

	Percent Capital Investment				
	Solid Processing	Solid-Fluid Processing	Fluid Processing	Petro-Chemical	Vapor Chemical
Process equipment (not installed)	30	26	20		
Process equipment (installed)*	43	37	29	51	40
Equipment and auxiliaries, foundations, supports, frames, insulation, painting, instrumentation, sewers, drains, erection, site preparation, testing, etc.					
Piping*	4	9	17	6	8
Production machinery and equipment (installed)	47	46	46		48
Auxiliary components*	26	26	23	18	26
Process building, land, offices, warehouses, laboratories, transportation and utilities facilities, electrical installations, yard improvements, etc.					
Construction overhead*					
Field and home office, supervision, engineering, insurance, etc.	9	10	13	9	8
Contractors' fees*	6	6	6	6	8
Contingencies*	12	12	12	10	10
Non-manufacturing capital invested	53	54	54		

* These percentages total 100% for complete plant.

COMPARE COST OF CAPITAL INVESTMENT — TABLE II

	Percent Capital Investment			
	A Chemical Plant	B Chemical Plant	C Chemical Plant	D Chemical Plant
Land and site development	6.0	8.0	9.5	15.0
Office and laboratory	1.0	1.5	7.0	8.0
Repair shops	3.0	3.0	2.5	2.0
Time office and hospital	0.5	1.0		1.0
Power house and water supply	36.0	1.5*		11.5
Department C	17.0	3.5	36.0	25.0
Department CA	22.5	73.5	22.0	31.0
Transportation	6.0	0.5	15.0	1.5
Engineering	8.0	7.5	8.0	
Contractors' expense and profits			21.0	
Contingencies			15.0	5.0

Before a proposed plant is estimated, certain factors must be established. They include plant site, material production, utilities and services, raw product availability, freight and transportation facilities. A certain amount of engineering is necessary for a preliminary estimate. Required, for example, are: flowsheet, plot plan, service requirement layout, equipment list, main building layouts, quotations on special equipment, labor and material and erection costs, contractors' fees, engineering costs and contingencies. Such an estimate, when completed, should be accurate to within plus or minus 10%.

After these fundamental factors are established, a pattern is set up for capital costs involved. Each estimator has his own idea how information may be arranged for proper presentation. Each company usually is aware of the advantage of standardization in arranging costs for presentation. Management is usually interested only in a final figure, but economists and cost accountants like to separate estimates into a code.

In this respect, I think the AACE Standards Committee has started a system which, if properly presented and sold to management, has merit. A capital cost code with four major areas was presented in last year's (1957) AACE meeting. This code, which could be used for a complete plant estimate, includes: (1) battery limits, (2) storage and handling, (3) utilities, (4) services.

Let's refer to the tables. Such comparison as presented in them has no value for an estimator if he cannot interpret it. How can we use the tables? Segregating the items is a tough job because we have no key to their use. Which of these percentage comparisons would aid your accuracy in making preliminary estimates?

A comparison of these tables proves only one thing — there is no lack of individual thought! How far, though, can we grow on individual thought? These tables indicate that the AACE plan is designed to help everyone. Result of its use will be more sound cost estimation.

FIRMING THEM UP

Within the last few years, management has become exceedingly cost-conscious. During our periods of prosperity after World War II and the Korean War, industry and government spent freely, supposedly to support a sound economy. Government debt increased, taxes grew; to curb inflation, government and industry knew that spending should be backed by more sound investment estimates and costs.

Estimates should be closer to capital appropriation. During the inflationary period, actual costs were two to five times more than the original estimates. Of course, the estimator always has a justification, but in the simulated prosperity, little was done about a bad situation.

Today, estimators and cost engineers are sharpening their pencils. Management cannot sell capital investments without sound estimation. The day of firmer estimates has arrived.

COMPARE COSTS OF PETROCHEMICAL CONSTRUCTION (1957) — TABLE III

Engineering costs	23.0%
Special Equipment	10.0
Heat exchangers, cooling equipment	10.0
Pumps, compressors and drivers	10.0
Heaters, furnaces, etc.	8.0
Vessels, drums and towers	7.0
Trays and tower internals	6.0
Piping	6.0
Instruments	6.0
Insulation and fireproofing	3.0
Building and real estate	2.0
Electrical equipment (excluding drivers)	2.0
Structures (excluding buildings)	1.5
Tanks	1.5
Foundations	1.5
Yard cleaning, grading, paving, etc.	1.0
Machinery (excluding pumps)	0.5
Elevator cranes and auto parts	0.5
Painting	0.5
	100.0%

* No power house

Time is now allocated so that we can, with greater engineering aid, make a more sound job of estimating. The firm estimating plan is as follows:

- Preliminary estimate to secure approval of the capital to go ahead with a firmer estimate.
- Engineering estimate from an outside consultant for comparison.
- Comparison of estimates by company, cost engineers and consultants.
- Final estimate — the product of both the company and the consultants — to be used for final appropriation.

This type of estimate is the "ultra-estimate." It is the cure for earlier mistakes, but it is not new. It is an old competitive pattern transformed. The estimate sometime takes over a year for completion; the process is thoroughly understood and complete. Drawings are made in more detail, and flowsheets are more complete, showing instrumentation. Equipment is completely engineered; specifications must be sound and complete. Prices must be firmer, labor and erection costs must be sound. Finally, more time is allotted for conferences and decisions.

Let's make estimation a profession in which we will continue to know where we are going. Our field is broadening with new ideas and thoughts. The young need mature judgment; their elders need help to keep abreast of modern methods. AACE has accepted the challenge; its success is up to an imaginative, aggressive membership.

(This paper is based on a presentation before the 2nd. Annual Meeting of AACE, June 16, 1958)

Technical Papers

Available free, AS LONG AS THEY LAST, to AACE members, (.50 to nonmembers) by request:

1 — "Accurate Ways to Estimate Pipe Costs" by W. G. Clark

2 — "Computer Speeds Economic Evaluations" by J. F. Adams, W. L. Massey, Jr. and M. Dmytryszyn

3 — "Construction Cost Trends 1913-1957 as measured by the ENGINEERING NEWS - RECORD Cost Indexes"

5 — "Ratio Cost Engineering" by H. C. Bauman

6 — "The Cost of Preparing an Estimate" by K. G. Wolfe

7 — "Which Depreciation Method is Best" by B. J. Gaffney

11 — "Joint and By-Product Costing" by A. F. Dershowitz

13 — "Preparation of Fire Insurance Valuations" by E. J. Burrows

16 — "Estimating Capital Costs from Process Flow Sheets" by W. E. Hand

18 — "Estimate Cost of Compression Plants" by I. Bromberg

19 — "Heat Exchanger Cost Data" by H. J. DeLamater ($1.00 to nonmembers)

20 — "Estimate Cost of Fractionation Systems" by I. Bromberg.

Through the cooperation of J. B. Weaver, the Atlas Powder Company has kindly offered to make available to AACE members the following two booklets: METHODOLOGY OF PROFITABILITY, October, 1958, and CHEMICAL COST AND PROFITABILITY ESTIMATION, Compendium of Annual Reviews by J. B. Weaver. Address your request to: James B. Weaver, Manager, Economic Evaluation, Atlas Powder Company, Wilmington 99, Delaware.

The Association is endeavoring to publish in the BULLETIN or make available reprints of papers that are related to the field of Cost Engineering. If you are preparing a paper or have presented previous papers in this field please send a copy to the Executive Secretary so that it can be included in future surveys of data in this area.

Problems in Bidding Overseas Work

(Continued from page 50)

Because of this difference in currency values, it is usually a good idea to avoid converting one currency to another by any kind of factor. If possible, you should price the material and labor in the currency that is going to be paid for it. Thus you arrive at total dollars plus total "other currency." In accounting, record the expenditures in dollars that are paid in dollars, and record other expenditures in the currencies actually paid. Then you may apply some arbitrary exchange rate to get a grand total for approximate total cost.

Another thing that sometimes gets involved in foreign work is financing. In this country, when you bid a job you are not particularly concerned where the client obtains the money to pay you — as long as it is a solvent firm. In foreign work it is quite often a condition of the request for bids that the bidder aid in financing the project. Sometimes it is necessary to make an actual investment in the client company. Some times it is required to accept a portion of payment in stock in the company or to receive payment out of the company's future income.

It is quite common for large contracts, where a good deal of foreign purchases are involved, to be financed through the Export-Import Bank or the World Bank. Each agency requires a considerable amount of preliminary studies. It is necessary to submit a market survey, cost estimate and feasibility report to prove to them that the particular project is one that has a chance of paying the money back. All of your expenditures, on a job financed by either agency, have to be reported to the agency. In the case of the World Bank financing, certified invoices are sent to them, and they actually pay the vendor or sub-contractor. You don't even handle the money. There is a certain amount of overhead connected with financing overseas that is not common in the United States.

(This article is based upon a presentation before the San Francisco section, AACE, October 29, 1958.)

News From the Regions

ORGANIZATION OF NEW SECTIONS

In order to provide an opportunity for group activities at the local level, the AMERICAN ASSOCIATION OF COST ENGINEERS encourages the formation and establishment of regional sections.

The advantages of closer personal relationships, opportunities for discussion of mutual problems and the frequent dissemination of data vital to the profession are a few of the reasons for joining or forming a section

If you reside in an area not covered by an existing Section and would like to benefit from and assist in its organization contact: B. V. Nemeth, *Chairman, Regional Sections Committee, AACE*, 840 Madison Avenue, Painesville, Ohio.

Members residing in the following areas can write to the people listed below. These men are "spark plugging" sections in their regions.

SOUTH CHARLESTON, WEST VIRGINIA
W. F. Gott, Union Carbide Chemicals Company, P.O. Box 836, South Charleston, West Virginia.

QUEBEC, CANADA
James Bachman, 175 Hemlock Drive, Beaconsfield, Quebec, Canada.

ESSEX, ENGLAND
John H. Herbert, 22 Fairway, Leigh-On-Sea, Essex, England.

ST. PAUL, MINNESOTA
Dr. Bernard J. Gaffney, Wood Conversion Company, First National Bank Building, St. Paul 1, Minnesota.

KANSAS CITY, MISSOURI
Lloyd E. Weast, Jr., 5620 East 48th Street, North, Kansas City 16, Missouri.

Members in the Baton Rouge, Cincinnati, Detroit, Los Angeles, Miami, Niagara Falls, Oak Ridge, Savannah and St. Louis areas are working on the organization of sections in their regions. If you would like to help develop a section in these areas contact Mr. B. V. Nemeth.

CHICAGO — MIDWEST SECTION

"Business in Politics: A study in Urgency" was the title of the talk by Mr. Peter H. Clayton, Vice President for Public Relations, John F. Meissner Engineers, Inc. at the annual meeting of the Section which was held at Phil Smidt's Restaurant in Whiting, Indiana.

Results of the annual election were announced by Mr. Clovis Dykeman as follows:

Chairman: Donald I. Meikle, Meissner Engineers, Inc., Chicago

Vice-Chairman: Warren W. Twaddle, Amoco Chemical Corporation, Chicago

Treasurer: Stanley H. Griffin, Kraft Foods Division of National Dairy Products Corporation, Chicago

Secretary: E. John Mark, The Pure Oil Company, Chicago

Board Member: John A. Foushi, Jr., Inland Steel Company, Chicago Heights.

Board Member Tor Skogstad, The American Appraisal Company, Milwaukee, Wisconsin, will also be serving his unexpired term.

Elected to the Nominating Committee were: Chairman, Daniel T. Brink, Corn Products Refining Company, Chicago; C. L. Tsaros, Institute of Gas Technology, Chicago; and Kenneth A. Anderson, Procon, Inc., Des Plaines, Illinois.

Questionnaires dealing with what Educational Institutions should provide in the way of course work related to the field of Cost Engineering were distributed by L. R. Shaeffer and filled out by those in attendance. Mr. L. R. Shaeffer is a member of the Education Committee of the AACE under the chairmanship of Dr. Max S. Peters. This preliminary questionnaire is part of a survey that will be conducted throughout the entire AACE membership.

A panel discussion on "Cost Records of Public Utilities, Process Industries, and Heavy Industry" highlighted the May 7th meeting at the University Club. Panelists were Frederick L. Scott, Natural Gas and Pipeline Company of America; Daniel T. Brink, Corn Products Refining Company; and Edward W. Sheehan, Inland Steel Company.

Mr. Clovis Dykeman, Standard Oil Company of Indiana, will speak on "Final Cost Reports" at the June 4th meeting.

MID-ATLANTIC SECTION

The annual meeting was well attended as 72 people heard Mr. Wesley J. Dodge, Socony Mobil Oil Company, present a paper on "Selection of the Most Economical Insulation Thickness".

Newly elected officers were:

Chairman: Wesley J. Dodge, Socony Mobil Oil Company.

Vice Chairman: Cecil H. Chilton, McGraw-Hill Publishing Company

Secretary: Thomas J. Kent, Jr., The M. W. Kellogg Company

Treasurer: Jay M. Gorey, Esso Research and Engineering Company

Director (2 year): Edward J. Gibbons, Colgate-Palmolive Company

Director (1 year): Arthur P. Lothrop, Universal Atlas Cement Company

Chairman Dodge made a strong plea for amending the national constitution to incorporate a single membership fee to include both national and sectional dues. National President C. Arthur Miller, who had come from Montreal to attend the meeting, suggested that Mr. Dodge prepare a memorandum or resolution on the subject which could be presented to the National Board at Pittsburgh.

Irwin Bromberg, Chairman of the Cost Control Committee gave a favorable report of the progress of his committee.

MONTREAL AREA

With an almost 100% increase in attendance, the second meeting of members in the Montreal area was held on April 22nd. The meeting was suggested by AACE President, C. Arthur Miller; organized by Russell C. Surtees, Canadian Industries, Ltd.; and presided over by James Bachman, Quebec Hydro-Electric Commission

The discussion which followed the luncheon centered mainly on the topic of membership fees. It was generally felt that it would be desirable to have a uniform fee ($15.00 was suggested) payable to the AACE head office. AACE headquarters, in turn, would reimburse the Regional Sections annually with, say, $5 00 per member, and thus help the growth and activities of the regional sections. Views expressed on the subject of membership fees will be sent to B. V. Nemeth, Chairman, Regional Sections Committee.

Most of the members indicated that they will be attending the convention in Pittsburgh.

The next meeting will be held early in the fall. Plans are underway to officially establish the section at that time.

NEW ENGLAND SECTION

An enthusiastic organizational meeting was held on April 25th, and it was unanimously voted that a New England Regional Section be formed.

Acting Chairman H. J. DeLamater introduced Dr. O T. Zimmerman, who spoke about the purpose and objectives of the AACE and the events leading up to its founding.

The following officers were elected to take office on May 1:

President: Harold J. DeLamater, Anderson-Nichols and Company.

Vice-President: Walter H. Langhoff, Metcalf and Eddy.

Secretary: Bernard Fefferman, Badger Manufacturing Company.

Treasurer: Verne R. Hillman, N.R.C. Equipment Corporation.

Directors: Irvin Lavine, Industrial Research Service, Inc., Daniel J. O'Connell, Jr., Metcalf and Eddy, O. T. Zimmerman, University of New Hampshire.

A discussion on how to build membership culminated with the unanimous election of Charles V. Keane, Metcalf and Eddy, as Membership Chairman.

It was agreed to hold monthly meetings with the exception of June, July and August when no meetings will be held.

A fine film on the construction of the "Texas Towers," offshore radar warning stations, was shown.

After an interesting discussion on Cost Control, the section decided to undertake the project of developing a cost control system *that really works*.

In less than a month after its organization the section held its first regular meeting with 22 persons in attendance.

"Ways of Reducing Costs in Concrete Construction" was the subject of an illustrated talk by James P. Archibald, Portland Cement Association, at the May 22nd meeting held at the Massachusetts Institute of Technology.

The section voted to invite the 5th Annual Meeting of the AACE in 1961 to be held in Boston.

There will be a Board of Directors meeting on June 13th for the purpose of preparing a Constitution for the section as well as planning a program for the year. A petition for recognition by the national AACE will also be drafted for presentation at the meeting in Pittsburgh.

NORTHEAST OHIO SECTION

Mr. Glenn Anderson of Cleveland Electric Illuminating Company spoke on "Economic Factors in Plant Location" at the March 5th meeting which was held in the Cleveland Engineering and Scientific Society Building

Program Chairman, Robert E. Jones, introduced Mr. Anderson who is also president of Aero Space Association, a group of companies having a common interest in obtaining prime government contracts for defense work.

The movie, "Chemical Shore," was also shown.

President William J. Hegerty, The Colonial Iron Works Company, announced the sponsorship of a television program each Sunday by the C.T.S.C. in which the Section holds membership. The program is to be a quiz program with scientific questions for high school students, complete with prizes for the winners.

The section is well represented on the C T.S.C. with Mr. Hegerty as Representative to the C.T.S.C. Council; Harry F. Eisengrein, Republic Steel Corporation, as Representative to the Educational Committee; and Milton C. Wakefield as Representative to Career Guidance.

Taking office on July 1 will be the following recently elected officers:

President: Robert E. Jones, Standard Oil Company (Ohio)

Vice President: Milton C. Wakefield, Harshaw Chemical Company

Secretary: H. Dean Forrest, General Tire and Rubber Company

Treasurer: Harvey H. Huttenlocher, National Carbon Company

Board of Directors: James C. Cowan, Columbia-Southern Chemical Corporation, William J. Funk, Arthur G. McKee and Company

PITTSBURGH SECTION

Everything is in readiness for the 3rd Annual Meeting. Members of the section under the leadership of Dr. J. H. Black, U. S. Steel Corporation, have, as true hosts, organized procedures and made plans for the convenience of the delegates and their families.

The following recently elected officers took office on April 1, 1959:

President: James H. Black, U. S. Steel Corporation.

Vice-President: Philip J. Wilson, Jr., U. S. Steel Corporation.

Secretary: John F. Lovett, Pittsburgh Coke and Chemical Company.

Treasurer: Clarke I. Niemi, Koppers Company, Inc.

PITTSBURGH SECTION—*continued*

Director (2-year term): James J. Butler, Jr., Jones and Laughlin Steel Corporation.

At a meeting of the Section's Board of Directors, programs from previous meetings were reviewed and possible future programs were discussed. The following programs were suggested: speaker from the Association of Systems and Procedures, panel discussion on some phase of national committee work, National AACE President to speak at one meeting, a program on Profitability, a program on Engineering Design and Design Costs. The membership will also be solicited for any additional suggestions.

President Black appointed the following committee chairmen:

Program Committee: P. J. Wilson, Jr., U. S. Steel Corporation.

Publicity Committee: A. W. Seekins, Columbia-Southern Chemical Corporation.

Membership Committee: J. P. Majkut, Combustion Service and Equipment Company.

Harold G. Leavitt, Professor of Industrial Administration and Psychology at Carnegie Institute of Technology, was the speaker at the April 29th Dinner Meeting.

SAN FRANCISCO SECTION

Featured speakers for the regular quarterly meeting, held on April 29 at Tiny's Restaurant in Oakland, California, were Mr. M. C. Hofheinz of Columbia Electric Manufacturing Company and Mr. L. H. Przybyla of Taylor Instrument Company. The subject of discussion was a preassembled instrument panel cost and the impact of instrument selection on the panel cost. Mr. Przybyla pointed out the impact of miniature instruments on providing greater flexibility and lower panel cost while Mr. Hofheinz discussed the swing from full-graphic panels at very high cost to semi-graphic at a substantial saving in panel space and cost.

A lively discussion was held with particular emphasis on instrument density in order to provide the basis for determining approximate panel size in the preliminary estimating stage. In general it was the opinion of the speakers that there would generally be 1.5 to 2.0 instruments per lin. ft. of 90-inch high panel for full graphic installations and 3 to 5 per lin. ft. for semi-graphic.

Daniel B. Allen, Chemical Engineer in the Gas Division of Humble Oil and Refining Company, Houston, Texas died on November 12, 1958. He was one of the Charter Members of the AACE.

Edwin R. Keener died. He had been associated with the Columbia Gas Service Corporation of Columbus, Ohio as Senior Valuation Engineer.

What's Happening . . .

Edward J. Roth has been promoted to Assistant General Superintendent for the Premier Oil Refining Co. of Texas, a Division of City Products Corporation.

John H. Smithson is presently with the Celanese Corporation of America, New York City. He was previously affiliated with the Canadian Chemical Co., Ltd., Montreal, Quebec, Canada.

Dr. Irvin Lavine has been elected District Governor of District No. 779 of Rotary International. The district is comprised of clubs in Massachusetts, Maine, New Hampshire and parts of the Province of Quebec. He will be visiting 39 clubs from July 12 to September 15. Dr. Lavine suggested a Rotary meeting of AACE members in Pittsburgh.

Earle F. Young, Jr. has been promoted to Supervisor of Chemical Engineering Research with the Jones and Laughlin Steel Corporation, Pittsburgh, Pennsylvania.

Edward J. Scoble has been promoted to Assistant Manager of the Chemical Production Section of the Lederle Laboratories Division of the American Cyanamid Company, Pearl River, New York.

Kymus Ginwala is now affiliated with the Northern Research and Engineering Corporation of Cambridge, Massachusetts. He was previously with Arthur D. Little, Inc.

Dr. O. T. Zimmerman appeared on a state-wide television program as a representative of the University of New Hampshire's Faculty Welfare Committee. He presented facts in support of increases in faculty salaries.

E. F. Brummerstedt, AACE Secretary, is now Supervisory Estimator for the Bechtel Corporation in San Francisco, California. He had been associated with the Foster Wheeler Corporation in New York City.

John J. Levenson, Jr. has been named Executive Vice President of the Century Chemical Corporation of New York City.

Richard C. Brown of the Chemstrand Corporation has been transferred from Decatur, Alabama to New York City.

William G. Donaldson was named Vice President of the Emerson-Garden Electric Company, Inc., of New York City. He was formerly associated with Uhl, Hall and Rich.

George C. Vane formerly with C. F. Braun and Company, is now Senior Estimator for Atomics International in Canoga Park, California.

AACE INSIGNIA

A novel distinctive sterling silver tie-clasp and lapel button has been designed for members of the AACE. You will be proud to wear this personal jewelry which features the attractive AACE emblem.

The price is $2.30 for the lapel button and $3.80 for the tie-clasp, postage is included. Send your order and check to:

Executive Secretary
American Association of Cost Engineers
Durham, New Hampshire

Regional Section Directory

If you reside near one of the regional sections contact the secretary so that you can benefit from the worthwhile activities of your region. If a business trip coincides with a meeting of a section outside your region you are welcome to participate in any and all activities.

CHICAGO — MIDWEST

Chairman — Donald I. Meikle, Meissner Engineers, Inc., 300 West Washington Street, Chicago 6, Illinois.

Secretary — E. John Mark, The Pure Oil Co., 35 East Wacker Drive, Chicago 1, Illinois.

DELAWARE VALLEY

President — Herman A. Chapman, Atlantic Refining Co., 260 South Broad Street, Philadelphia 1, Pennsylvania.

Secretary — John J. Farrell, Catalytic Construction Co., 1528 Walnut Street, Philadelphia 2, Pennsylvania.

GULF COAST

Chairman — Walter H. Kluge, Southern Industrial Piping Co., P.O. Box 74, Houston 1, Texas.

Secretary — Thomas C. Ponder, *Petroleum Refiner*, P.O. Box 2608, Houston 1, Texas.

MID - ATLANTIC

Chairman — Wesley J. Dodge, Socony Mobil Oil Co., 150 East 42nd Street, New York 17, New York.

Secretary — Thomas J. Kent, Jr., The M. W. Kellogg Co., 711 Third Avenue, New York 17, New York.

NEW ENGLAND

President — Harold J. DeLamater, Anderson-Nichols and Co., 150 Causeway Street, Boston 14, Massachusetts.

Secretary — Bernard Fefferman, Badger Manufacturing Co., 230 Bent Street, Cambridge, Massachusetts.

NORTHEAST OHIO

President — William J. Hegerty, Colonial Iron Works Co., 17643 St. Clair Avenue, Cleveland 10, Ohio.

Secretary — James C. Cowan, Columbia-Southern Chemical Corp., P.O. Box 31, Barberton, Ohio.

PITTSBURGH

President — James H. Black, United States Steel Corp., Applied Research Laboratory, Monroeville, Pennsylvania.

Secretary — John F. Lovett, Pittsburgh Coke and Chemical Co., Neville Island, Pittsburgh 25, Pennsylvania.

SAN FRANCISCO

President — William G. Clark, Dow Chemical Co., P.O. Box 351, Pittsburg, California.

Secretary — Gus A. Anderson, Kaiser Engineers, 1924 Broadway, Oakland 12, California.

Personnel Service

POSITIONS AVAILABLE

MANAGER OF ENGINEERING COST ESTIMATING — A progressive, diversified corporation with headquarters in the Chicago area needs a Manager of Engineering Cost Estimating. The man we need must have had substantial experience in the past three or four years in estimating costs of processing equipment in installation as well as in minor additions and alterations to plant construction. Education and experience in engineering is required. A high-caliber man, analytical, thorough, and accurate, with the personality to work well with line and other staff engineering personnel is needed to fill the position.

Will report to the Vice-President of Engineering. Starting salary from $12,000 to $15,000.

Write complete background, with present compensation; replies are confidential. Our employees know of this advertisement. Write to:

American Association of Cost Engineers
Box No. 7-S
Durham, New Hampshire

For further information about the Personnel Service write to Executive Secretary, Ed Shanken.

American Association of Cost Engineers Organization for 1959

President — C. A. Miller
Vice-President — B. J. Gaffney
Technical program — J. J. Caufield
Convention arrangements — J. H. Black
Planning and Certificates — B. J. Gaffney
Immediate Past President — J. W. Hackney
Nominations — D. L. Meikle
Awards — J. W. Hackney
Insignia — N. Bach
Director Technical Committees — W. E. Hand
Terminology — D. Seltzer
Cost Records — C. Hirt
Estimating Methods — J. M. Gorey
Cost Indexes — W. G. Boston
Profitability — A. G. Bates
Director — Publications — W. G. Clark
Publications — J. F. Adams
Bulletin — E. D. Shanken
Bibliography — W. G. Clark
Director — Member Relations — E. K. Clark
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